

IN THE ABSTRACT:

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~~This invention relates to a processing apparatus for processing a sample such as a substrate. The apparatus includes a process chamber having an exposure apparatus for transferring a pattern onto a substrate as a sample in a predetermined atmosphere, a load-lock chamber connected to the process chamber, a transfer mechanism for transferring the substrate between the load-lock chamber and a coater-developer, a clean booth which covers the transfer path of the transfer mechanism, and a transfer atmosphere forming mechanism for flowing a clean gas in the clean booth.~~

-- A load-lock chamber has a substrate transfer path between a first gas atmosphere and a second gas atmosphere. The load-lock chamber includes a first gate valve through which a substrate is transferred between the first gas atmosphere and the load-lock chamber, a second gate valve through which a substrate is transferred between the second gas atmosphere and the load-lock chamber, and a gas supply mechanism which supplies the first gas and the second gas to the load-lock chamber. The gas supply mechanism is arranged to supply the second gas to the load-lock chamber when the first gate valve is closed and the second gate valve is opened during the substrate being transferred between the second atmosphere and the load-lock chamber. --